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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,267	06/20/2003	Raphael Raptis	UPR-1610	7558

7590 12/28/2004

Patent Law Offices of Heath W. Hoglund  
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EXAMINER

JONES, DAMERON L

ART UNIT PAPER NUMBER

1616

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/600,267

**Applicant(s)**

RAPTIS ET AL.

**Examiner**

D. L. Jones

**Art Unit**

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 9/30/04; 2/23/04; & 7/29/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/23/04 & 7/29/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## ACKNOWLEDGMENTS

1. The Examiner acknowledges receipt of the amendment filed 9/30/04 wherein claim 18 was added.

**Note:** Claims 1-18 are pending.

## APPLICANT'S INVENTION

2. Applicant's invention is directed to metal based cubane structures that are in a chemically inert shell as set forth in independent claims 1, 3, and 11.

## DOUBLE PATENTING REJECTION

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, and 6 of U.S. Patent No. 6,596,259. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant invention encompass those of the patented invention. The claims of the instant invention differ from those of the patented invention because the patented claims are directed to a metal cluster comprising  $\text{Fe}_4\text{O}_4$ , 12 pyrazolato groups, and four Fe atoms and the ligands conjugated to the pyrazolato groups present on the Fe complex are chlorines (four chlorines). The instant invention does not limit the ligands attached to the pyrazolato groups to chlorine. A skilled practitioner in the art would recognize that the ligands may be chlorine because in claims 6, 7, 10, 13, and 14 (instant invention), chlorine is listed as one of the possible ligands for the variable L (the ligand). In other claims, for example independent claims 1 and 11 (instant invention), the patented invention is encompassed because all that is required is the presence of a  $\text{Fe}_4\text{O}_4$  cluster in a chemically inert shell and optionally four Fe atoms and optionally, twelve bridging pyrazolato groups.

#### COMMENTS/NOTES

5. The restriction requirement is WITHDRAWN.

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6. It should be noted that no prior art has been cited against Applicant's claims.

However, Applicant MUST address and overcome the double patenting rejection above.


In particular, the claims are distinguished over the prior art of record because the prior art neither anticipates nor renders obvious a Fe(III) complex comprising an iron cluster in a chemically inert shell wherein the shell comprises four Fe atoms and twelve bridging pyrazolato group and the iron cluster comprises a Fe<sub>4</sub>O<sub>4</sub> cubane cluster. Likewise, the prior art neither anticipates nor renders obvious a compound of formula Fe<sub>8</sub>(μ-O)<sub>4</sub>(μ-pz)<sub>12</sub>L<sub>4</sub> as set forth in independent claim 3. In addition, the prior art neither anticipates nor renders obvious a Fe(III) complex comprising a metal cluster that forms a Fe<sub>4</sub>O<sub>4</sub> cubane core that is in a chemically inert shell.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. L. Jones whose telephone number is (571) 272-0617. The examiner can normally be reached on Mon.-Fri., 6:45 a.m. - 3:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on (571) 272-0887. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D. L. Jones  
Primary Examiner  
Art Unit 1616

December 27, 2004